

Conclusions: As opposed to patients with CIACB, patients with an extreme p wave prolongation ($p > 150$ ms) and no biphasic pattern may have a delayed conduction through the Bachmann's bundle without a complete block.

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Study of the circadian variation of the QT dynamics in myocardial infarction

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Introduction: The relation between the QT interval and heart rate is linear. The QT interval/RR interval relationship is generally described as QT dynamics. the linear QT/RR slope is influenced by the autonomic nervous system. In healthy individuals, the slope exhibits circadian variations : it is steeper during the day than during the night.

Aim: The aim of this study is to evaluate the circadian variation of the QT interval and the QT/RR slope in patients experiencing myocardial infarction.

Methods: This prospective study included 90 patients having myocardial infarction. They underwent 21 days after the acute phase, 24 hours ambulatory ECG (Holter) recording. The following parameters were studied : the QT end interval (QT_e), the QT apex interval (QT_a) and the slopes of QT_e/RR and QT_a/RR during diurnal and nocturnal periods..

Results: There was no significant difference regarding the QT_e and the QT_a intervals during the day and night. The mean diurnal slope and nocturnal slopes of QT_e/RR were similar (0.147 ± 0.073 vs 0.131 ± 0.062 , $p = \text{NS}$). The mean diurnal slope and nocturnal slopes of QT_a/RR were also comparable (0.123 ± 0.067 vs 0.119 ± 0.065 , $p = \text{NS}$).

Conclusion: The lack of circadian variation of the QT interval and the linear QT/RR slope in myocardial infarction patients reflects an imbalance in the autonomic nervous system. These results suggest an increase in the nocturnal sympathetic tone and may be associated with a higher risk of arrhythmia in this population. Further studies are needed to evaluate the role of the QT/RR slope in risk stratification after myocardial infarction.

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Infection on cardiac devices. A monocentric prospective study

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Purpose: The infections after cardiac device implantation (CDI) are not well known in the real life because of the multiplicity of the circumstances. This is a monocentric prospective study.

Method: 304 consecutive pts had a CDI in 6 months (feb to aug 2009): male 69% age 70 ± 15 yo. The data of the pts were consecutively collected:

type of device (VVI PM 10%, DDD PM 42%, CRT P 7%, VVI ICD 13%, DDD ICD 10%, CRT D 17%) (Primo Implant 73%, Device Replacement 21%, Lead Replacement 8%, Burying 2.3%).

components of the NNIS score (N1. Nosocomial Infection Surveillance): -1 duration of the procedure (83 ± 40 mn) ; -2 ASA score (Am.Soc.Anesth)(asal=4%, asa2=22%, asa3=43%, asa4=30%, asa5=0) ; -3 surgical site Infection (SSI) Class: Clean wound 73%, fever the days before 6%.

the prevention with antibiotic therapy was: - conventional: Cefuroxime 1.5 g 30 mn before and 0.75g each 2hr (93% ; 69% timing conformity); - Vancomycine 1gr 1hr before (3%); previous adjusted therapy (4%).

the follow-up was of 3 months.

Results: 7 SSI occurred at 43 ± 36 days (2.3%) for DDD PM=5, VVI ICD=1, CRT D=1. They were 2 endocarditis (for 2 implantations on the other

side after an extraction, with the same germ) sepsis = 1 (diabetes), loge infection = 4 (2 after burying). The 7 pts had an extraction of the device and the leads. The risk factors of SSI were anticoagulation (7/7 ; $p < 0.05$) ; controlateral implantation after previous sepsis (2/7, $p < 0.05$), burying on the same site (2/7 ; tendency), admission in Intensive Care Unit (3/7 ; tendency), antibiotic therapy too early (3/7 ; tendency).

Conclusion: SSI and sepsis after CDI depends of the clinical surroundings (Anticoagulation, Previous Sepsis, Burying, Intensive care unit. The complexity of the device (PM, ICD, CRT) has a low role.

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Is high sensitive C reactive protein related to clinical and echocardiographic risk of thrombo-embolism in patients with atrial fibrillation?

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Introduction: Atrial fibrillation is associated with a prothrombotic state with an increased risk of stroke. Recent studies suggested that there is an apparent link between thrombogenesis and inflammation.

Aim: we sought to study the relation between high sensitive C reactive protein (HS CRP) and clinical (CHAD score) and echocardiographic prothrombotic indexes in patients with atrial fibrillation.

Methods: we prospectively measured HS CRP in 100 patients with atrial fibrillation. The mean age was 56 ± 12 years. All patients underwent transthoracic echocardiography (TEE). The TEE risk factors for thromboembolism considered were: a peak left appendage velocity 0.2 m/s, the presence of a thrombus and a dense spontaneous echo contrast.

Results: HS CRP was correlated with the clinical CHAD score ($r = 0.54$, $p = 0.0001$). CRP value was significantly higher among patients with a CHAD score $2 (6.91 \pm 4.4 \text{ mg / dl vs } 4.35 \pm 3.8$, $p = 0.001$). Values of HS CRP were comparable between patients having 1 TEE risk factor and those with no TEE risk factor (5.13 ± 3.7 vs 6.5 ± 0.5 $p = \text{NS}$)

Discussion and conclusion: the significant correlation between the CHAD score and HS CRP could be explained by the existence in this score of factors associated with elevated CRP. Although no apparent relation was found between the HS CRP and echocardiographic risk factors of thromboembolism, these results do not exclude the inflammatory hypotheses in the pathogenesis of thromboembolism. A study of the correlation between CRP and thromboembolic complications during follow up of patients is mandatory.

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Renal failure after CRT implantation: more than a contrast nephropathy

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Background and purpose: We studied short term effect of CRT implantation on renal function and focused especially on the role of contrast agent dose.

Method: Acute renal failure (ARF) was defined as a decrease of more than 25% of the clearance of creatinine (Cl Cr) calculated with MDRD method within four days following implantation.

Results: We considered 141 patients referred for CRT implantation: male: 79%, mean age: 68 ± 12 , diabetes: 71%, HTA: 38%, Cl Cr: 48 mL ± 19 , median contrast dose: 48 mL (IR: 30/80), median BNP variation: -30% (IR: -58/-8), Haemoglobin (Hb) variation: -6.3% ± 11.2 .

ARF occurred in 19 patients (13.5%), 3 of them died and one was lost. Renal function of 14 out of the 15 remaining completely recovered. In-hospital stay longer than 10 days was more frequent in ARF group (OR=5.18, $p < 0.03$).

Decrease of Hb was the only independent factor of ARF with a negative correlation (OR=0.94, $p < 0.01$).